Marketing Nutrition in the Middle Grades: Adolescent Food Habits and Marketing Strategies That Work

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Preface

Healthy eating is an important life skill. It helps children grow, develop, and do well in school. Healthy eating prevents childhood and adolescent health problems such as obesity, eating disorders, dental caries, and iron deficiency anemia. It also lowers the risk of future chronic diseases such as heart disease, stroke, diabetes, and cancer and reduces potential health care costs (USDA *The School Environment*, 2000). However America's children are not eating healthfully. Nutrition professionals utilize familiar strategies to educate children about nutrition and to encourage healthy eating behaviors. Classroom nutrition lessons alone have proven ineffective in improving eating habits, and even broad-based social marketing and coordinated school health programs are slow to be accepted. The field of marketing offers an opportunity to reach adolescents through media they recognize.

The National Food Service Management Institute has undertaken a review of literature to examine current food habits of adolescents; efforts made at marketing nutrition in the cafeteria setting; and marketing strategies employed by advertising professionals to reach young people. We invite all groups interested in developing marketing programs for schools to apply information from this report to help ensure a successful campaign.

Executive Summary

Adolescence brings with it capacities for abstract and critical thought and for contemplating the future. However, the use of these new capacities depends on the environment in which adolescents live. In addition, maturity in this age group - a major factor in relation to responsibility, perspective and the ability to limit impulsivity and exercise self-control – is questionable. The American economy directly targets marketing campaigns at middle graders, and their peer environment engenders a sense of identity confusion. As a result health practices of this age group are often inappropriate, resulting in immediate health consequences – childhood overweight, obesity and diabetes as well as risk factors for devastating chronic diseases in adulthood.

Adults involved in the school environment view advertising as an ideal way to increase awareness and promotion of healthy eating behaviors with middle school students. This publication is intended to provide marketing professionals with background information in order to develop and conduct effective market research in promoting healthy food choices to middle school students. The goal of this research is to develop marketing concepts to be tested in student focus groups, and subsequently refined into a 2-3 year marketing plan for delivering school-based point of service nutrition information to adolescents. By examining food habits of adolescents; efforts made at marketing nutrition in the cafeteria setting; and marketing strategies employed by advertising professionals to reach young people, this paper lays the foundation for an effective marketing plan.

Nutrition needs are higher in adolescence than at any other time in the life cycle. As children move from elementary to middle school, consumption of breakfast, fruits, vegetables, and milk decreases, while soft drink consumption increases. Staggeringly, nearly three-fourths of teenage boys drink three 12-ounce cans of soda each day and two-thirds of teenage girls drink about two cans per day. More U.S. children are eating away from home than ever before, resulting in their consuming more fat and saturated fat. Food preferences and eating habits among ethnic groups living in the United States result in similar but more extreme deviations from recommended nutrient levels than in the general population. Children participating in the National School Lunch Program (NSLP) - approximately 60 percent of all students in public schools - consume more fruits, vegetables, beans and milk than their non-participating peers. Though NSLP menus include a wide variety of foods, students are omitting many healthy options. Suspect is the availability of alternative food sources. School faculty and staff themselves do not feel the environments in middle grades are conducive to healthy eating habits. When asked how to increase awareness and promotion of healthy eating behaviors, recommendations included the development of an advertising campaign for school meals.

Unhealthy eating habits are established early in life, and tend to be maintained indefinitely. The percentage of young people who are overweight has doubled since 1980. Health consequences of childhood obesity include type-II diabetes and an increased risk for heart disease and stroke. The total costs of diseases associated with obesity have been estimated at almost $100 billion per year. Unhealthy trends in adolescent food

habits must be addressed in order to keep our economic and health care systems solvent and viable into the future.

Successful health communication campaigns employ public relations and news media to communicate a single message through a number of channels, combining mass media with individual, group, and community activities without relying on public service announcements. They consider where the target population is with respect to the Stage of Change model. School-based interventions that employ media and marketing activities incorporate them into the larger nutrition intervention; typically including classroom nutrition education, cafeteria modifications, and parental involvement as well as promotional activities. For example, USDA's Team Nutrition program attempts to build skills and motivate children to make healthful food choices by reaching them through multiple channels, in a language they speak, and in ways that are engaging and entertaining. The 5 A Day program is often employed in the school setting to increase children's consumption of fruits and vegetables. 'Gimme 5: A Fresh Nutrition Concept for Students' is one study that evaluated the media aspect of its intervention, finding that their media marketing materials and activities captured high school students' attention and were acceptable. In the cafeteria setting promotional activities; soliciting student input; changing the cafeteria environment; and point of service efforts have had varying degrees of success. Ineffective behavior change interventions tend to have long or irrelevant messages; preach negative health consequences; restrict access to certain foods; or utilize only classroom instruction to impact behavior.

The advertising industry tenaciously pursues the youth market, striving to understand, anticipate and influence the perceived needs and desires of young consumers. It behooves nutrition professionals to examine the methods advertisers use to design marketing campaigns. Marketing to adolescents is a challenge. Young consumers' habits are affected by peer influence; ethnicity and culture; the school environment; and commercialism. To successfully sell to children and teens, marketers conduct extensive market research; segment youth audiences; design advertising campaigns that are language-, culture-, and image-sensitive; and track young consumers' responses. Market research shows that teens spend their money on clothing, entertainment, fast-food, snacks and personal-care products - in that order.

Market segmentation capitalizes on the belief that different groups of consumers have diverse attitudes, interests, and behaviors, and that by acknowledging these differences marketers can increase their chances of influencing consumers' purchasing. The overwhelming characteristic of the adolescent market is its desire to fit in. Teenagers are notoriously fickle; they are marketing savvy, and they don't like a hard sell. Gender and ethnicity affect marketing strategies targeting youth, however socioeconomic status does not.

Effective marketing succeeds in representing customer lifestyles and making products relevant to their lives. A range of advertising styles, techniques, and channels are used to reach children. More traditional channels include television, radio, and magazines. 'Advertorials,' or advertisements disguised as articles, to influence children's purchasing

habits have particular effect with teen audiences, as do celebrity endorsements. Innovative techniques include magalogs, or magazine-catalog hybrids; Web-based advertising; kid's clubs; and a phenomenon called 'guerilla marketing.' Inevitably, marketers see schools as the ideal venue to influence attitudes, build long-term loyalties, introduce new products, test market, promote sampling and trial usage and -- above all -- to generate immediate sales.

Health practitioners can and must employ these marketing principles to address behaviors that result in premature morbidity and mortality. Social marketing is "the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society" (Andreasen, 1995). A successful social marketing campaign for young consumers is about creating food and nutrition concepts that resonate with their desires, values, and behaviors. In particular:

- The message must identify the explicit rewards or incentives and barriers that are perceived by this targeted audience.
- Messages must be simple, strong, repetitive, consistent, and specific about desired behavior.
- Messages must promote rewards in terms of taste instead of nutrition.
- Messages and images must be upbeat to engage and excite children and teenagers.
- Messages must convince children and teens that selecting healthful foods like fruits and vegetables is simple to do.
- Messages must be presented in a catchy and easily remembered format.

A successful social marketing program must utilize multiple and reinforcing communication channels and approaches. In addition to advertising, multiple, complementary methods such as environmental support are necessary to engender the consistent consumption of healthful foods by adolescents.

Social marketing interventions attempt to affect many variables influencing behavior change; therefore evaluation efforts must be linked to desired outcomes that are realistic for the length, scope and complexity of the intervention. Evaluation should begin early and be an integral part of the development process, because the primary purpose of evaluation is to support movement - providing a picture of where energy is being spent and whether the initiative is producing the desired effects - not to judge success or failure.

Having examined the food habits of adolescents; the efforts made at marketing nutrition in the cafeteria setting; and marketing strategies employed by advertising professionals to reach young people, recommendations can assist in laying the foundation for an effective marketing plan.

Recommendations

Market Research

- Identify the most effective message(s) from a few potential messages by using focus groups to pretest at the concept stage. Ensure that the marketing strategy is appropriate by subsequently pre-testing materials.

- Use focus groups, surveys, interviews, picture drawing, story-telling, secret ballot, and especially observation to obtain feedback and insights from youth.
- A trained youth peer should conduct focus groups in a familiar setting. Participants should be of a similar age (within 2-years) and unacquainted with each other.

Marketing Strategies

- Keep the message consistent. Choose a single message or a few messages that are variations of a common theme.
- Avoid messages that are lengthy or that focus on negative health consequences.
- Incorporate both nutrition and behavioral messages that address adolescent priorities, such as enhanced athletic and academic performance; better muscle tone; weight control; and improved personal appearance.
- Utilize a number of channels to reinforce one another and to increase the target audience's chance of exposure.
- Use point-of-service messages to provide behavioral prompts at the moment students act.
    - Place vibrantly colored signage at the cafeteria entrance, perhaps on the daily menu in addition to the POS messages.
    - Use easily identified labels of POS signage to make food selection simpler. Consider using he Food Guide Pyramid as a familiar and credible graphic.
    - Focus POS messages on the food's being economical, energy-rich, satisfying/tasty, and convenient.
- Teens respond well to taste-testing, discount price promotions and motivational, as opposed to educational, messages.
- Boys aged 12 to 15 shun the foods their moms approve of, so avoid the wholesome, "it's good for you" plug with this demographic. Extreme sports are a better theme to build on.
- Develop specific messages targeting African American, Hispanic, and Asian populations distinctly. Once these messages are developed, use mainstream, English-language media to effectively reach young Hispanic teens. Messages for Asian groups should focus on improving family health and lifestyle.
- Remove barriers and unhealthful options so that desired behaviors are more readily achieved. In the school environment, this would include competition to school meals - vending machines, school stores, and a la carte foods in the cafeteria.
- Soft drink availability must be addressed if adolescent dietary habits are to improve.
- To improve environmental support, apply the principle of cross-selling to the school setting.

Evaluation

- Integrate evaluation development into the overall intervention development process.
- Include both outcome and process assessments in the program evaluation.
- Ensure that evaluation efforts correspond to realistic outcomes given the length, scope and complexity of the intervention.
- To assess changes in consumption of the promoted food selections in school meals or cafeteria a la carte offerings, use sales data and total quantities of foods used by

school food service staff. But to evaluate youth awareness and acceptability of the marketing strategies also include interviews, surveys, or observations.

In conclusion, we invite all groups interested in developing marketing programs for schools to apply information from this report to help ensure a successful campaign.

Introduction

What happens, or does not happen, during adolescence has implications that last throughout a lifetime and affect both individual and public health. What sets adolescents apart from children is the increasing autonomy they demonstrate. Their own decisions, behaviors and relationships increasingly determine their health and development (WHO, 1999). "Adolescents make important decisions under the set of circumstances in which we know adults have the greatest difficulty: unfamiliar tasks, choices with uncertain outcomes and ambiguous situations" (Board on Children, Youth, and Families, 1999). Moreover, adolescence brings with it expanded capacities - for abstract and critical thought and for contemplating the future. However, the use of these new capacities depends on the environment in which adolescents live (WHO, 1999; National Middle School Association, 1998). Given the American economy, which directly targets marketing campaigns at middle graders, and a peer environment that engenders a sense of identity confusion (George and Alexander, 1993), intervention is not only opportune, it is imperative.

Middle school students, ages 10-15 years, are developmentally ready to make choices about all aspects of their lives. However, their maturity - a major factor in relation to responsibility, perspective and the ability to limit impulsivity and exercise self-control – is questionable. In fact research has found that maturity is “curvilinearly related to age: highest among 6th graders, dropping to its lowest level among 10th and 11th graders and increasing into adulthood” (Board on Children, Youth, and Families, 1999).

Health practices of this age group are often inappropriate for lifelong good health (George and Alexander, 1993; National Middle School Association, 1998; Travis, 2001). National research shows that food consumption habits of American youth do not reach the Dietary Guidelines for Americans. The average diet exceeds recommended levels of fat, saturated fat, and sodium (Kennedy and Goldberg, 1995). American children and teens are eating more frequently than in the past; they eat more meals away from home; and consume more restaurant and fast foods, resulting in higher fat and saturated fat intake; and more of their calories are coming from snacks (Crockett, 1995; Kennedy and Goldberg, 1995; Buscher et al, 2001). These food habits are resulting in the anticipated health consequences – the prevalence of childhood overweight, obesity and diabetes is increasing at an extreme rate. Minority populations are suffering most drastically (Kennedy and Goldberg, 1995; NCHS, 2000; Crawford, 2001).

For students participating in the National School Lunch Program, the School Meals Initiative is resulting in improved food options and student food selection (USDA *SNDAII*, 2001). However, barriers to identifying, procuring and consuming healthful foods exist in the school setting. Students and adults differ in their perspectives of barriers to good nutrition. Adults involved in the school environment perceive barriers in terms of funding and time constraints, competition for priority and administrative commitment, and a conducive environment (NFSMI, 2000). Middle school students see barriers in terms of the foods offered, the cafeteria ambiance, food service staff demeanor and time allotted to eat and socialize (Meyer *Stages*, 2000).

Concerned adults view advertising as an ideal way to increase awareness and promotion of healthy eating behaviors to middle school students. It is believed that students are highly influenced by the media, particularly sports figures and popular musicians. Other possibilities for intervention include family education and role modeling by teachers, school administrators, and parents. These adults believe an advertising campaign for school meals is needed (NFSMI, 2000).

The lesson health professionals must take from the advertising industry is this: “To have a successful social marketing program - one that effectively influences the eating behavior of children and teenagers - we must use multiple and reinforcing communication channels and approaches” (Kraak and Pelletier, 1998). Teen marketing has found success with virtually every strategy available to the advertising world. The key is making the messages pertinent to youth. To do that marketers must know their customers. Market research and, market segmentation are the first steps. Next comes testing the message and the delivery to ensure youth is on board, and then evaluating to see if the plan is working. School nutrition professionals have an advantage over any advertising agency in the nation – they already have entry to the schools.

By promoting positive lifestyles and developing effective decision-making skills, school-based nutrition programs offer the most systematic and efficient means to improve the health of youth in America (Kolbe et al, 1993; USDHHS, 1991). This publication is intended to provide marketing professionals with background information in order to develop and conduct effective market research in promoting healthy food choices to middle school students. **The goal of this research is to develop marketing concepts to be tested in student focus groups, and subsequently refined into a 2-3 year marketing plan for delivering school-based point of service nutrition information to adolescents. By examining food habits of adolescents; efforts made at marketing nutrition in the cafeteria setting; and marketing strategies employed by advertising professionals to reach young people, this paper lays the foundation for an effective marketing plan.**

Adolescent Food Habits

Nutrition needs are higher in adolescence than at any other time in the life cycle. Inappropriate nutrition at this phase can have life-long effects - linear growth can be slowed or halted, sexual maturation may be delayed, peak bone mass can be compromised, and risk factors for chronic diseases, including heart disease, cancer, and stroke may be established (Travis, 1999; Barlow, 1998).

The United States Department of Agriculture (USDA) Center for Nutrition Policy and Promotion employs the Healthy Eating Index, a summary measure of Americans’ overall diet, in order to describe where Americans’ diets stand and what aspects need improvement. Each of ten components is scored (one to ten), so that the minimum score possible is ten, the maximum 100. An HEI score above 80 implies a ‘good’ diet, an HEI score between 51 and 80 implies a diet that ‘needs improvement,’ and an HEI score less

than 51 implies a ‘poor’ diet. Most Americans’ diets fall in the ‘needs improvement’ range, at HEI 71. Scores are highest for children aged two to three, the youngest category measured. By age fifteen HEI scores average 60 for males and 63 for females, representing the lowest HEI scores of all age groups (USDA, 1998).

Trends in Food Habits

Over the past three decades, a considerable shift has occurred in the adolescent diet. Trends can be identified not only in what kids are eating, but where and under what circumstances they are getting their nutrition.

More U.S. children are eating away from home than ever before. In fact in 1994 about two-thirds of youth age six to ninteen consumed food and drink provided away from home, up from 55 percent in 1977-78. So where are kids eating out? Teen boys frequent fast food restaurants most often for food outside the home, while teen girls site the school cafeteria, closely followed by fast food restaurants as their likely eating out venue (USDA *Table Set 19*, 2000). Recent research indicates that children and adolescents consume more fat and saturated fat when eating at restaurants compared to home or school (Zoumas-Morse et al, 2001). Aside from meals prepared by parents, 9-11 year olds are most often eating school meals and food they prepare for themselves, typically afternoon snacks and breakfast, but sometimes lunch as well (Public Health Institute, 2001).

The Child and Adolescent Trial for Cardiovascular Health (CATCH) study found that as the number of eating occasions increase for adolescents, so do total calories, calories from sugars, and sodium. In contrast, an inverse relationship is seen between number of eating occasions and the relative amounts of saturated fat, total fat, protein, and sodium consumed (Dwyer, 2001). Most U.S. students eat at least five times during the day, and nearly all eat at least three times per day (Devaney, 1995).

It may come as no surprise that eating patterns and food choices change as children move from elementary to junior high and middle school. During this transition consumption of breakfast, fruits, vegetables, and milk decreases, while soft drink consumption increases. In fact, the proportion of beverages coming from soft drinks more than triples between the third and the eighth grades with concurrent reductions in milk and fruit juice consumption (Lytle LA, 2000; Weber Cullen, 2001). Longitudinally, soft drink consumption among teenage boys has nearly tripled since the 1970s, with almost three-quarters of teenage boys drinking an average of 34 ounces--almost three 12-oz. cans' worth--per day, and two-thirds of teenage girls drinking 23 ounces--about two cans' worth. More than a third of teens are choosing soda as their beverage at lunch. Dinner is the meal at which the largest increase in fruit juice consumption has occurred – a staggering 304% (USDA *Table Set 19*, 2000).

Carbohydrates in the form of simple sugars dominate adolescent snacks and breakfast (Summerbell, 1995; McCoy, 1986) with major sources including soft drinks, table sugars, syrups, sweets, sweetened grains, fruit-aides and drinks, and milk products (Guthrie et al,

2000; Bowman, 1999). With the exception of milk, America's kids are drinking more beverages. While lower-fat milks have replaced higher-fat milks, total milk consumption has decreased across all age and gender groups. Three-fourths of teens were drinking milk in the late 1970's, dropping to just over half of teens in the 1990s. The largest decline in milk consumption is seen in teenage girls (Cavadini, 2000; USDA *Table Set 19*, 2000).

Grain-based entrée combinations, such as pasta with sauce, rice dishes and pizza, are more popular now than in the past. Of these foods pizza is the most frequently consumed among school-age kids. Consumption of tacos and burritos has increased as well. The proportion of children and teens eating grain-based snack foods (crackers, popcorn, pretzels and corn chips) has doubled since the 1970s. These snacks are slightly more popular among girls, one third of whom eat at least one of these snack foods per day (USDA *Table Set 19*, 2000).

As children get older fruit consumption declines. Less than half of teens consume some fruit or fruit juice on any given day, down from 70% of children under age five (USDA *Table Set 19*, 2000). A similar decline is not seen for vegetables. In fact an increase in high-fat potato consumption has led to an apparent increase in vegetable intake, however adolescents are not meeting the recommended five servings of fruits and vegetables per day (CDC, 1999; Cavadini, 2000; USDA *Table Set 19*, 2000). Less popular vegetables are green beans, corn, green peas and lima beans, with less than 16 percent of children or teens reporting having eaten them on a given day. Even fewer children and teens are eating dark green or deep yellow vegetables (USDA *Table Set 19*, 2000).

Looking at specific nutrients, overall caloric intake has decreased, as has the proportion of calories from fat (39%-32%) and saturated fat (15%-12%) (Cavadini, 2000; USDA 2000). However, adolescents are still consuming excesses of fat, saturated fat, sodium and protein (USDA *Children's diets*, 2001; Devaney, 1995). Given the concurrent decline in physical activity, caloric intake exceeds output (National Center for Education in Maternal and Child Health, 2001). Children and teen-aged boys are meeting the Recommended Dietary Allowance for most nutrients, with the exceptions of magnesium, vitamin E, calcium, zinc, and vitamin A. Teen-aged girls fall far short of the RDA for calcium, phosphorus, magnesium, zinc, vitamin E, vitamin A and iron (Alaimo, 1994; USDA *Table Set 19*, 2000). U.S. children consume less than the minimum recommended level of fiber, which is associated with obesity (Alaimo, 1994; Hiza, 2001).

Ethnicity and Gender Variations in Food Habits

Food preferences and eating habits vary among ethnic groups living in the United States. Consequently disparities in nutritional well-being and resulting health implications exist. The National Heart, Lung, and Blood Institute (NHLBI) *Growth and Health Study* examined nutrient intakes of preadolescent girls by race. Black girls had a significantly lower intake of calcium and a higher intake of vitamin C compared to white girls. Ninety percent of black girls and 84% of white girls exceeded the recommended intake level for total fat. A similar excess was noted for saturated fat (92 and 93%, respectively). Low

intakes of calcium and zinc were found for both black and white girls (Crawford, 1995; USDA *Children's diets*, 2001).

The NHLBI *Growth and Health Study* also endeavored to determine whether racial differences between black and white girls exist with regard to eating practices associated with excessive weight gain. Such eating practices included eating while watching television or doing homework, and skipping meals. Results showed that black girls are more than twice as likely as white girls to frequently engage in these eating practices, even when controlling for socioeconomic and demographic effects. In addition, black girls more frequently engage in eating practices associated with weight gain at an early age (McNutt, 1997). In order to control weight, Hispanic females report greater use of diuretics and meal skipping; Asians report more binge eating; and blacks report higher rates of vomiting as compared to white females. Black and American Indian females are most likely to be satisfied with their bodies (Story, 1995; Leslie et al, 1999).

The traditional Mexican diet is rich in complex carbohydrates, derived mainly from corn and corn products, beans, rice, and breads. The typical Mexican diet contains adequate protein in the forms of beans, eggs, fish and shellfish, and meats, however the extensive use of frying as a cooking method results in the Mexican diet's being high in fat (Delpapa, 1990). With emigration to the United States, major changes occur in the Mexican-American's diet. Positive changes for health include a moderate increase in the consumption of milk, vegetables, and fruits, and a large decrease in the consumption of lard and Mexican cream. Negative nutritional changes include a severe decline in the consumption of traditional fruit-based beverages, which are replaced by high-sugar drinks, as well as a decrease in the consumption of complex carbohydrates, such as beans and rice. Research also indicates that Mexicans in the United States eat more meat and saturated fats than Anglos, and use fewer low-fat dairy products. The nutrients most likely to be inadequate are calcium, iron, vitamin A, folate, and vitamin C (Delpapa, 1990). Mexicans also are less likely to recognize high-fat foods than whites (Romero-Gwynn, 1992; USDA "Children's diets," 2001; Borrud, 1989). In summary, average daily consumption of milk, meat, fruits and vegetables, and bread is inadequate in Mexican American teens (Murphy, 1990).

Food Habits in the NSLP

Historically the priority of the USDA's Child Nutrition Programs has been to serve "lunches and breakfasts that are nutritionally well-balanced and make meaningful contributions to children's daily nutrient needs." The USDA's *School Nutrition Dietary Assessment I*, conducted in 1991-92, indicated that school lunches did not meet the 1990 Dietary Guidelines for various nutrients. Therefore, in 1995, the USDA launched the School Meals Initiative for Healthy Children (SMI). SMI is designed to improve the nutritional quality of school meals by assisting food service personnel in preparing nutritious and appealing meals through educational and technical resources and by encouraging children to eat more healthful meals (USDA *SNDAII*, 2001).

The second School Nutrition Dietary Assessment study demonstrated that on a typical day in 1998-99, approximately 60 percent of all students in public schools participated in the National School Lunch Program (NSLP). Participation by 9-11 year olds has been documented at 72% (PHI, 2001). Students who could receive free meals participate at a higher rate (80%) than either students who could receive reduced-price meals (69%) or students who pay for their meals completely (48%). Asian/other children are least likely of any ethnicity to participate in the NSLP (USDA *SNDAII*, 2001). Children participating in the NSLP consume more fruits, vegetables, beans and milk than their non-participating peers (PHI, 2001).

It is typical for NSLP menus to include two or more types of milk, a choice of entrée, and three or more fruit and vegetable options. Even with this variety, researchers found that 16 percent of lunches and 14% of breakfasts selected by students in secondary schools did not include milk. Optional bread or grain products were omitted in more than a third of the lunches served in secondary schools. In addition, 12% of students who had an opportunity to include a serving of fruit, juice, or vegetables in their breakfasts did not do so (USDA *SNDAII*, 2001).

The frequency of omitted menu items in secondary schools may be influenced by a greater availability of alternative food sources. “In addition to bringing food from home or, in the case of the School Breakfast Program, choosing to eat breakfast at home, options include purchasing components of the USDA reimbursable meal or other foods not offered in reimbursable meals on an a la carte basis; buying food from a school store, snack bar, or vending machine; and, for lunch, leaving school to eat elsewhere” (USDA *SNDAII*, 2001).

The School Nutrition Dietary Assessment II study reports, “A la carte foods are the most common alternative to a USDA-reimbursable meal. More than nine out of ten schools make beverages or foods available for a la carte purchase at lunchtime. A la carte programs tend to be most extensive in middle schools and high schools and often make it possible for students to purchase meals entirely a la carte.” During a typical week in 1998-99, a la carte sales in public NSLP schools generated an average of $913 per 1,000 students. Average weekly a la carte revenue for middle schools was $1,760. This revenue is inversely related to participation in the NSLP, so that schools with the highest levels of NSLP participation reported the least a la carte revenue and schools with the lowest levels of NSLP participation reported the most a la carte revenue (USDA *SNDAII*, 2001).

Three quarters of high schools and more than half of middle schools offer food or beverages through vending machines, commonly located in or near the cafeteria. Forty-one percent of high schools and 35% of middle schools vend food or beverages through school stores, snack bars, or canteens. In addition the ability to leave school grounds is available in 6% of middle schools and more than a quarter of high schools (USDA *SNDAII*, 2001). Latino and Asian/other populations report access to soda vending machines more commonly than whites (PHI, 2001). When faced with a low-fat snack in a vending machine, adolescents consider taste the most important factor in snack selection,

with price being the second consideration. The more frequently an adolescent uses vending machines, the less likely they are to select low fat options (French et al, 1999).

School stores offer another alternative to school lunch. Recent research shows that almost half of middle school students frequent school stores at least once per week. School stores are generally open before and after school, and many are open during lunch service. Not surprisingly, students at schools in which stores compete with school lunch are much less likely to buy school lunch compared to students at non-competing schools. The majority of snacks available in school stores in middle schools are high in fat and sugar. The most popular items are sugar candies, followed by cakes and cookies, beverages (40% of beverage sales are soft drinks), chocolate candy, chips and crackers, meat sticks and frozen treats. Researchers note, “Not one fresh fruit or vegetable was sold” at any of the stores included in their study. The nutritional needs of adolescents make snacking an important component of their healthy eating habits, and school stores can play a positive roll in providing those snacks. However, the nutritional quality of snacks currently sold in school stores is poor (Wildey, 2000). And while males eat snack foods and sodas in addition to their school lunches, females eat them in place of their school lunches (Seelig, 1997).

Health Consequences of Adolescent Food Habits

Unhealthy eating habits that contribute to health problems tend to be established early in life, and young people who have unhealthy eating habits tend to maintain these habits as they age. In fact obesity in adolescence has been associated with obesity in adulthood (Flegal et al, 1998), and the percentage of young people who are overweight has doubled since 1980. Health consequences of childhood obesity include type-II diabetes and an increased risk for adverse levels of lipids, lipoproteins, and blood pressure, primary risks for heart disease and stroke (NCHS, 2000). Of children aged five to fifteen who are overweight, 61% have one or more cardiovascular disease risk factors, and 27% have two or more (Freedman et al, 1999).

Increases in the prevalence of overweight and obesity among American children are not limited to one gender or ethnic group. In fact no ethnic group is exempt from the obesity epidemic. Research in African-American, Hispanic, and white populations clearly indicate that white children are at lower risk for childhood overweight than are African-American or Hispanic children. National data are unavailable or unreliable on the prevalence of overweight and obesity for Native-American and Asian-American groups (Crawford, 2001). African Americans, Hispanic Americans, Asian Americans and Pacific Islanders, and American Indians suffer disproportionately from type II diabetes as compared to whites (NIH, 2001; PHI, 2001).

The total costs of diseases associated with obesity have been estimated at almost $100 billion per year, or approximately 8% of the national health care budget (Wolf and Colditz, 1998). Unhealthy trends in adolescent food habits must be addressed in order to keep our economic and health care systems solvent and viable into the future.

Overcoming the Barriers to Good Nutrition

Given the state of adolescent nutrition, as described above, it is clear that barriers to identifying, procuring and consuming healthful foods exist and must be addressed. The National Food Service Management Institute (NFSMI) conducted research to determine the nature of the nutrition environment in the middle grades nationwide and to identify barriers to good nutrition. Focus groups included school principals and superintendents, teachers and coaches, and foodservice managers and directors. The barriers to good nutrition that were identified follow.

- Lack of time
- Lack of funding
- Physical environment
- Menu and menu choices
- Competitive foods
- Lack of commitment by school administrators, the community and parents
- Outside influences

From this list, it is clear that participants did not feel the environments in middle grades were conducive to healthy eating habits. Vending machines and a la carte sales of unhealthy food items were cited specifically. Participants gave many examples of mixed messages concerning nutrition. Some included the use of food as a reward; vending unhealthy foods in and outside the cafeteria; lack of role modeling by teachers and coaches; and offering school breakfast only during testing occasions (NFSMI, 2000).

A healthy school nutrition environment has been described as one that gives students consistent, reliable health information - and ample opportunity to use it. For example, in a healthy environment:

> The classroom, the school dining room, and other school activities provide clear and consistent messages that explain and reinforce healthy eating and physical activity habits.
>
> Students learn to make healthy lifestyle choices not only in the classroom and the school dining room, but also at class parties, sports events—wherever they are throughout the school day.
>
> Students have many opportunities to practice healthy habits. They can choose from an array of healthy food options, eat in relaxed and comfortable surroundings, and enjoy daily physical activity (USDA *Changing the Scene*, 2001).

Participants in the NFSMI focus group study offered possible solutions to barriers impeding good nutrition. While they believe that if adequate funding was provided the barriers relating to the physical environment and lack of time could be solved, the remaining barriers were seen as less fiscally responsive. When asked how to increase awareness and promotion of healthy eating behaviors, recommendations included the development of an advertising campaign for school meals. The consensus was that

students are highly influenced by the media, particularly sports figures and popular musicians. Other suggestions included family education and role modeling by teachers, school administrators, and parents (NFSMI, 2000).

Middle school students see barriers to good nutrition in terms of the foods offered, cafeteria ambiance, food service staff demeanor and time allotted to eat and socialize (Meyer-Stages, 2000). Specifically, barriers to young consumers' ability and desire to change their food-related decisions and behavior include nutritious foods not being readily available at home, in school, and in other settings; misperceptions about healthful eating; and aggressive promotion of unhealthful foods through commercial efforts (Borra et al, 1995).

Marketing Nutrition – What Works

A review of successful health communication campaigns shows myriad common characteristics (Backer et al, 1992). Specifically, successful campaigns utilize a number of channels to reinforce one another and to increase the target audience's chance of exposure. When selecting communication channels, they consider the reach, the frequency of exposures, the potential impact, and the cost of the channel.

Successful campaigns combine mass media with individual, group, and community channels and activities. Television and radio spots can introduce a message. Newspaper or magazine articles can reinforce it, and point-of-sale (or service) materials provide behavioral prompts at the moment they can be acted upon. More broadly, press releases, brochures, posters, and even recipes and presentations contribute to a successful campaign.

Successful campaigns communicate a single message or a few messages that are variations of a common theme. With the number of messages targeted at consumers estimated at 1,400 per day (Kotler and Andreasen, 1996), it is imperative to be consistent in the message, repeating it over and over.

Successful campaigns do not rely on public service announcements (PSAs) alone to bring about behavior change. PSAs may fit into an overall communication plan, but assess the extent to which your target audience watches PSAs, how they will be disseminated, and if they can effectively be coordinated with other aspects of the campaign.

Successful campaigns employ public relations and news media to increase the visibility of the social marketing intervention (Backer et al, 1992). Public relations firms provide information on the campaign to newspapers, magazines, television and radio stations and entertainment media.

And successful campaigns consider where the target population is with respect to the Stage of Change model. Mass media has proven effective in introducing an idea or increase awareness, but may be less effective in assisting a targeted population in adopting and maintaining a change in behavior (Andreasen, 1995).

The '1% Or Less' campaign illustrates the potential of health communication. Mass media were used to encourage members of one community to switch from whole or 2% milk to 1% or fat-free milk. Paid advertising and public relations resulted in low-fat milk

sales' increasing from 29% of overall milk sales to 46% of sales in the month following the campaign and the increase was maintained for at least six months. Given this data, a media-only approach can be sufficient to encourage a significant proportion of the population to alter the dietary habit targeted by the intervention (Reger et al, 1999).

Cafeteria-based Marketing Efforts

The majority of school-based interventions that employ media and marketing activities incorporate them into the larger nutrition intervention; typically including classroom nutrition education, cafeteria modifications, and parental involvement as well as promotional activities.

Team Nutrition

Team Nutrition is a USDA nutrition education program in which schools join representatives of health and education organizations, the food industry, and nutrition experts to actively involve children and their parents in nutrition education (Anonymous, 1996). The Team Nutrition mission is to build skills and motivate children to make healthful food choices by reaching them through multiple channels, in a language they speak, and in ways that are engaging and entertaining. The six communication channels include: food service initiatives; classroom activities; school-wide events; home activities; community programs and events; and media events and coverage. These channels offer a comprehensive network for delivering consistent nutrition messages to children and their caretakers which will educate them about the importance of healthy eating and reinforce the messages through a variety of sources (USDA *TN Policy Statement*, 2001).

No one message or single delivery strategy will adequately meet the marketing objectives of the Team Nutrition campaign, so the campaign uses social marketing principles to change behavior to improve individual well being (Center for Nutrition Policy and Promotion, 1995; USDA *TN Policy Statement*, 2001). Promotional materials include videos; sample action plans, teasers, and news releases; logo and letterhead slicks; chefs' recipes; certificates of appreciation; and posters (USDA, 1996).

5 A Day

"In 1988, the California Department of Health Services embarked upon an innovative multi-year social marketing program to increase fruit and vegetable consumption. The '5 a Day--for Better Health!' campaign had several distinctive features, including its simple, positive, behavior-specific message to eat 5 servings of fruits and vegetables every day as part of a low-fat, high fiber diet; its use of mass media; its partnership between the state health department and the produce and supermarket industries; and its extensive use of point-of-purchase messages." Due to the program's apparent success in raising public awareness, increasing fruit and vegetable consumption, and creating partnerships between public health and agribusiness, the National Cancer Institute and the Produce for Better Health Foundation adopted the campaign as a national initiative in 1991 (Foerster

et al, 1995). California continued its innovation by creating the '5 A Day Power Play' program targeting youth. In this intervention, fourth and fifth grade students exposed to a school and community intervention ate 0.40 more servings of vegetables and fruit as compared to students in the control schools (Foerster et al, 1998).

'Gimme 5: A Fresh Nutrition Concept for Students' is one study that evaluated the media aspect of the intervention, specifically whether the media marketing materials and activities captured high school students' attention and were acceptable (Nicklas et al, 2000). The overall intervention included the school-based media campaign, as well as classroom workshops, school meal modification, and parental involvement. Outcomes show that dietary habits of high school students can be influenced by positive media messages relative to that age group, increased exposure to a variety of tasty products, and minimal classroom activity (Nicklas et al, 1998; Nicklas and O'Neil, 2000).

The media-marketing component of 'Gimme 5' paid attention to the special considerations of adolescents. The standard strategies of behavior change don't work with teens, whose perspective is immediate and peer-focused. Therefore, both nutrition and behavioral messages addressed teen priorities, such as enhanced athletic and academic performance; better muscle tone; weight control; and improved personal appearance. Due to peer influence and modeling behaviors, the campaign targeted not only the study sample, but other grades as well.

Media-marketing materials and activities included marketing stations, table tents, produce giveaways, PSAs, contests, and posters. Presentation utilized bright mixtures of colors; popular local festival themes; and fragmented, scattered pictures with minimal white space. The marketing stations - large exhibits in the cafeteria - introduced monthly promotional themes by featuring student pictures, artwork, collages and mirrors. Table tents included teen-targeted nutrition messages and an interactive game coordinated with the monthly promotional themes. Free, featured produce, typically donated by industry partners, was offered in the cafeteria to faculty, staff and students. The school public address system was used for PSAs informing students of produce contests and giveaways. Contests were paper and pencil activities. Posters featured student health interests with playful wording and colorful images (Nicklas et al, 2000).

The 'Gimme 5' evaluation showed that student awareness of all media marketing aspects was high (between 96% and 83% of students) with awareness of the contests and PSAs being the lower at 66% and 46% respectively. Students who were aware of the various marketing approaches found them highly acceptable, with 85-97% giving them a "thumbs up" survey rating, with the exception of the PSAs. The researchers hypothesize that PSAs are associated with routine administrative announcements, which students tend to ignore as routine and redundant. The students involved in the 'Gimme 5' intervention were predominantly a white, middle to upper socioeconomic demographic. However, black, Hispanic and other ethnicities were represented. Awareness and acceptability of all marketing aspects was similar across ethnicities. Females were significantly more aware of the marketing stations and the food giveaways than males. And females found all

marketing aspects more acceptable than did males, however both genders reported high acceptability (Nicklas et al, 2000).

Promotional Activities

Research indicates that students participating in the NSLP eat better than their non-participating peers (USDA, 1993; PHI, 2001). Given this information, increasing participation in the school meal programs may be a valid avenue to improving students' diets. Official awareness occasions, such as National School Lunch Week, prompt school foodservice personnel to delve into the world of marketing and promotions. Typically promotions are used to increase participation. By holding fun promotions and introducing new menu offerings, participation has been shown to increase during the campaign, particularly in the students paying full price for school meals (Munson and Turley, 2001; Robinett, 2001). Most often promotional activities employed by local schools go unevaluated. Anecdotal evidence may suggest that the students enjoy the activities and may even be left with a positive impression about nutrition, but effectiveness of these efforts in changing behavior, be it NSLP participation or food consumption, is unknown. (Chong and Rodon-Ramirez, 2001; Munson and Turley, 2001).

In addition to marketing campaigns, other types of interventions, like training programs, community based activities, and materials development, are equally if not more important in long-term behavior change (USDA *Social Marketing*, 1997).

Soliciting Student Input

Having an idea of students' expectations of the school cafeteria can help boost satisfaction, attendance and participation. Even kids as young as grades three to five want quality food, good service and a nice environment. Students are very brand conscious, and variety is important, as is familiarity with the foods offered. So, how are school cafeterias stacking up? One study showed that students were "moderately satisfied" with their school's food and nutrition service program, with their cafeteria and with the quality of food it served. Particularly in the school cafeteria, kids get bored with the same fare in the same setting. As with other aspects of their lives, they have come to expect change - positive change - and they expect it often (Meyer, 2000).

Soliciting recommendations from students can be extremely effective in menuing for school meals. Student advisory councils exist in many schools to obtain the students' perspective. Purchasing procedures that are responsive to student advice will allow school cafeterias to serve healthy items, such as sandwich wraps and 'gogurt,' that are trendy and popular with teens (Anonymous, 2000). Students offer specific recommendations for foods in the school cafeteria, including changes that would result in healthier options, such as less overcooked foods, fewer fried foods, fewer canned fruits and vegetables, less salt, and greater variety. Student focus groups have identified barriers to increased consumption of fruit and vegetables as lack of availability and variety, and inconsistency in taste (Nicklas et al 1997). In one illustration, doubling the number of fruit choices, increasing salad ingredient selections, and reducing the price of

both fruit and salad by 50% increased purchases threefold, presumably resulting in increased consumption of fruit and salad. Women and people trying to control their weight were most likely to make these nutritious purchases (Jeffery et al, 1994).

Changing the Cafeteria Environment

The American Dietetic Association's School Nutrition Services dietetic practice group offers several recommendations for improving the cafeteria's appeal. Update the cafeteria personnel's look with colorful shirts and visors, taking the lead from shopping mall food courts. In fact, using a food court set-up in schools expedites traffic flow in the cafeteria, and lunch outposts around campus offer busy students food on the go. Publicize the product with a menu board near the cafeteria, or go high tech with a Web site for food and nutrition services - students can access the cafeteria's Web page in computer lab or from home, check the day's menu, perhaps even get nutrition analyses of menu items. Putting a cafeteria online demonstrates that nutrition services recognize student interests and needs. School food services can team up with food corporations for promotional food items and corresponding decorations, not to mention advertising space on that Web site (Anonymous, 1998).

Given substantial funding a cafeteria, and its participation, can be transformed. In a Texas high school $1.4 million in renovations, funded primarily with Child Nutrition money, resulted in a 100% increase in daily deposits and doubled participation. This feat was accomplished with abundant choices, fast and sometimes self-service, and state-of-the-art merchandising. Students surf educational sites on the Internet at computer stations in the cafeteria. Television monitors promote school safety (Lee, 2001). Food choices at the many serving lines may please discriminating teens, but there is quite a bit of high-fat and highly processed food to wade through.

Sometimes marketing is simply a matter of availability. The school board in Madison, Wisconsin has replaced the soda vending machines in its four high schools with ones stocking milk. The first high school making the switch reports very strong sales – 200 bottles in the first four weeks, and the others are following suit. At $1.00 per 16 oz. bottle, price is not a deterrent. In the milk's favor: the machines stay on throughout the day, as opposed to being disabled for part of the day like the soda machines; a variety of milk is offered: chocolate, chocolate malt, reduced fat white, and reduced fat strawberry; and plastic, resealable bottles with a "Grip It. Sip It" logo. Students comment that prior to the vending switch they bought sodas because there was no other option (Associated Press, 2001).

Influence at Point of Service

The point of service (POS), also termed 'point of purchase' or 'point of sale,' affords an opportunity to effect immediate food-purchasing behavior. Examples of POS materials include cards placed on the cafeteria serving line, grocery store shelf tags, posters, banners, and floor decals. Well-designed, well-placed POS messages can effect long-term consumer food selection (Contento et al, 1995; Lai et al, 1995; Buscher et al, 2001).

School cafeteria-based POS messages are most effective when they express the benefits of engaging in healthful behavior as opposed to threat-implying messages. Specifically, messages should emphasize the food's being economical, energy-rich, satisfying/tasty, and convenient (Bowman et al, 1995; Buscher et al, 2001). Buscher et al (2001) discovered that POS messages may serve as a reminder, rather than a pressure to consume a healthy food. POS messages are typically located directly in front of the targeted food item, however consumers more often recall signage at the cafeteria entrance. Studies have found POS cards to be effective when they are vibrantly colorful, have an active cartoon character and a picture of the targeted food (Clawson et al, 2000; Buscher et al, 2001). The Food Guide Pyramid has also been shown to lend credibility to POS signage (Joyce et al, 1996).

What doesn't work

The well-documented relationship between diet and chronic disease indicates a need to encourage young adults to make eating decisions that will reduce their risk of developing these diseases (Joyce et al 1996). While health professionals know that certain behaviors lead to disease, simply telling young people the health consequences of certain actions is not an effective method to bring about behavior change.

Restricting access to certain foods focuses children's attention and increases their desire to obtain and consume those foods. Restricting children's access to palatable foods is not an effective means of promoting moderate intake and may encourage the intake of foods that are best limited in the diet (Fisher and Birch, 1999; ADA, 2000).

Ineffective POS interventions may be due to a number of issues. Food cost is certainly one. Promoted items must be priced competitively with less healthful food options that are available. Also, messages that are too long or focused on irrelevant food characteristics or negative health consequences will not prompt food purchase (Joyce et al, 1996; Buscher et al, 2001). Table tents and POS cards giving detailed nutrient analysis data have proven ineffective (Cinciripini, 1984; Dubbert et al, 1984; Joyce et al, 1996).

Classroom instruction alone does not provide students the skills necessary to make behavioral changes in eating patterns. In fact, the Centers for Disease Control and Prevention contends that no single intervention strategy is adequate to effect behavior change. Instead a multifaceted approach, termed coordinated school health, is recommended. The facets, or 'components,' of coordinated school health include health education; physical education; health services; nutrition services; counseling, psychological and social services; healthy school environment; health promotion for staff; and family and community involvement (CDC, 1996). Critical to the success of any behavior change effort is the incorporation of the community and school environments in addition to classroom intervention. The details of coordinated school health is beyond the scope of this paper, however the reader is referred to the Centers for Disease Control and Prevention's Division of Adolescent and School Health at

http://www.cdc.gov/nccdphp/dash/cshpdef.htm or *Health Is Academic*, a comprehensive guide to coordinated school health (Marx, 1998).

One strategy that is often overlooked in school-based health promotion programs is the use of media and marketing. The advertising industry tenaciously pursues the youth market, striving to understand, anticipate and influence the perceived needs and desires of young consumers (Kraak and Pelletier, 1998; Nicklas et al, 2000). It behooves nutrition professionals to examine the methods advertisers use to design marketing campaigns.

Marketing to Adolescents

American youth are becoming consumers at a very early age, and they have the spending power to attract marketing strategies specifically designed for them. In 1991 four- to twelve-year-olds had an average annual income - from parents, family, chores, and outside jobs - of $420 (McNeal 1990). Add this discretionary money to the influence these children have on family purchases - estimated at $45-65 billion annually (Stipp, 1993), and it becomes evident why the advertising industry aggressively searches to understand and anticipate young consumers' wants and needs.

In 1999, U.S. advertising expenditures by the food and beverage industry totaled $215 billion across all communications media. Advertising for food and food products ranked 6th of all product categories at approximately $3.3 billion. Fast-food advertising, which is a separate category from food and food products, expended about $3.1 billion. Nonalcoholic beverage advertisers spent $1.3 billion, and candy and snack advertising totaled about $1.1 billion (Gallo, 1990; Advertising Age, 2000). Annually, McDonald's produces and delivers more than 200 different advertisements nationally, spending about $740 million. The effort has earned them a name that is synonymous with fast food, and has resulted in a reputation as "the children's marketer" (Kalish, D. 1989).

Even for mass media professionals, marketing to adolescents is a challenge. Children's and teenage youths' consumer habits are affected by peer influence, ethnicity and culture, the school environment, and commercialism (Crocket and Simms, 1995; McNeal, 1992; Morton, 1994-95). Commercialism, defined as the means of communication that creates consumer awareness and induces the desire for products, permeates the lives of children and teens in America (Morton, 1994-95). To successfully sell to children and teens, corporations and marketers conduct extensive market research; segment youth audiences; design advertising campaigns that are language-, culture-, and image-sensitive; and track young consumers' responses (Scammon and Christopher, 1981).

Market Research

Marketing to the teen audience starts with a basic marketing principle: know your audience. Elissa Moses, author of *The $100 Billion Allowance: Assessing the Global Teen Market* says, "Infiltrate them. If you're Ford Motor Co., go on a road trip with them. Understand how they feel, what they care about and what motivates them, so that you can create offerings which really benefit them" (Krauss, 2001). To obtain opinions, feedback,

and insights from children and teenage youth, market researchers typically use standard research methods. These include focus groups, surveys, interviews, picture drawing, story-telling, secret ballot, and observation (Kraak and Pelletier, 1998). In fact market researchers operate from the premise that the child's purchasing process tends to be more impulsive than planned. So, observing children while they purchase gives a more accurate picture of what influences children's consumer behavior than do direct interviews (Rust, 1993). It is important to note that research methods used with adults are not necessarily applicable to children. Adult marketers tend to read adult meanings into what children say (Hyatt, 1991), so it is advisable to replace an adult moderator with a trained youth peer to obtain more reliable information (Spethmann, 1992).

Using conventional focus groups with children can lead to ''follow-the-leader'' group dynamics. The result is inadequate data, misleading interpretations, and an unsuccessful campaign (Segall and Paine, 1995). Familiarity appears to reduce the influence of peer pressure in focus groups. Therefore, ensure that the children are of a similar age (within 2-years) and are unacquainted with each other; collect information in familiar surroundings such as in schools, at summer camps, or at sporting events (Segall and Paine, 1995); and separate boys and girls, as girls tend to answer more frequently when genders are mixed (Spethmann, 1992).

Market research may seek input on several factors: product, concept, commercial tests, audience segmentation, packaging, promotions, print advertisements, brand name identification, or pricing (Harrigan, 1991). When designed and conducted well, youth market research reveals pearls for those who will listen. For example, research indicates that teens are spending most of their money on clothing, followed by entertainment. After these items, fast-food, snacks and personal-care products share third place (Lippe, 2001). Children and teens identify products more frequently by brand name rather than food category (Arnott, 1993; Guber, 1997). And market researchers have identified characteristics children look for in their favorite restaurants: best food, best toys and prizes, best meal packs, the most fun, best playgrounds, and the opportunity to accompany friends with their parents (Guber and Berry, 1993).

Market Segmentation

Market segmentation helps advertisers target their efforts more effectively. It involves dividing the population into groups based on demographic variables such as age, gender, and ethnicity (Monash University, 2000). "The basic premise of market segmentation is that different groups of consumers have diverse attitudes, interests, and behaviors. And, by acknowledging these differences, marketers believe they can increase their chances of influencing consumers' behaviors" (Ngo, 1993). However, large gaps exist in understanding young consumers' behavior (Stipp, 1993).

The overwhelming characteristic of the adolescent market is its desire to fit in, to belong (Ebenkamp, 1999; Goldstein, 1999). Teenagers are notoriously fickle; they are marketing savvy, and they don't like a hard sell (Barrett, 2000; Fawcett, 2000; Krauss, 2001; Lippe,

2001). Advertisers can fall into the 'cool' trap, forgetting that like everyone else, teens want utility, things that help improve their quality of life (Lippe, 2001).

Gender differences pervade adolescence. Boys aged 12 to 15 buy the foods their moms don't serve: meat sticks, salty snacks, hero sandwiches, soft drinks. Advertisers can capitalize on the idea of a product's not being 'mom-approved' by appealing to the irreverent, the disgusting bathroom humor and the gross-out factor teen boys embrace (Fawcett, 2000).

Research over the past several years indicate that, within most of the urban centers across the U.S., it is the ethnic teens that set the trends (Cheskin, 1996), so understanding this demographic can be quite lucrative. It is generally agreed by marketers that preferences and consumer habits of various ethnic groups become significant during older childhood and adolescence, when ethnic and cultural identities are formed (Stipp, H. 1993). "The ability to understand and depict cultural nuances and the use of appropriate language are the two greatest challenges faced by marketers and educators in effectively reaching ethnic minority groups that are distinct and heterogeneous" (Kraak and Pelletier, 1998).

Culture is often demonstrated in terms of family, friendship, eating habits and values. "Acculturated individuals are those who acquire a second culture as opposed to those who assimilate and abandon their original culture." For Hispanics, acculturation seems to be a more predominant mode of adaptation to the U.S. culture than assimilation. Therefore, Hispanics preserve their native culture while at the same time learning the dominant culture. In the traditional Hispanic culture family values are very important, as are social values, such as keeping the same friends forever and respecting older people. Marketers must recognize the dual cultural identity of this market segment (Korzenny 1999). That said, because they are attitudinally different, speak their own brand of Spanish, "Spanglish," and are born in the U.S., Hispanic teens are considered a freestanding, separate and distinct market from the at-large U.S. Hispanic market. Hispanics under the age of twenty account for more than one third of the total Hispanic population in the U.S. McDonald's sales promotion approach is multifaceted in order to reach ethnic youth by using radio and cable television, delivering messages to African Americans and Hispanics (Kalish, D. 1989). Young Hispanic teens can most effectively be reached through mainstream, English-language media (Cheskin, 1996).

While each Asian culture is distinct, all share common traits: reverence for family, a high level of responsibility, respect for elders, honoring traditions, importance of unity and harmony. An effective advertising message for all Asian groups would be to position the product as helping to improve family health and lifestyle. Appeal to this culture's strong motivation to achieve prosperity. Integrate familiar and motivating themes of family, culture and tradition. Finally, communications using Asian's native language have strong influence on their attitudes as customers, image perceptions of the product and what they buy. To reach Asian Americans effectively, they must be made to feel that they are the audience the ad is directed to:

- demonstrate recognition and respect for their cultural heritage;
- communicate in Asian languages via media channels they use;

- emphasize customer education rather than the "hard sell;"
- incorporate culturally significant occasions, themes, or items;
- tailor the message to the culture, language, and needs of the target segment, so they will identify with the ad and recognize that they are the target audience (McKay, 1999).

Demographic variables including income and occupation may be used in the description of market segments. However, socioeconomic status does not deter marketers from marketing to low-income adolescents (Monash University, 2000). They are seen first as adolescents, a segment that is particularly susceptible to what marketers call the emotional sell. For example, the emotional attachment to a movie character is transferred to a common product, like a T-shirt. That attachment overrides other considerations, like the price and quality of the T-shirt, or even the need for the T-shirt. Advertisers constantly barrage teens, encouraging continuous consumption and acquisition at the expense of reasoned decision-making, thrift, and environmental sensitivity. Kids are left to deal with financial realities; they probably can't afford the product, and convincing their parents may be tough. Consider a celebrity selling a product kids can't afford. Marketers are putting a tremendous pressure on kids -from the celebrities and from their peers. Such "status sell" tactics have resulted in kids' participating in violence to obtain the product. Celebrity-sell of costly products also stresses family relationships and budgets. Kids' desires result in requests for high-priced products that realistically are not suited to many family finances (Consumers Union Ed Services, 1990). These are social issues not considered by the marketing industry in its endeavors to capture the lucrative youth market.

Advertising Strategies and Channels

Effective marketing succeeds in representing customer lifestyles and making products relevant to their lives. A range of advertising styles, techniques, and channels are used to reach children and youth to foster brand loyalty and encourage product use (Kraak and Pelletier, 1998).

Television advertisers use attention-getting techniques, such as attractive models and familiar songs and jingles. These provide easily stored and recalled images from memory; they motivate children to retain information by highlighting the relevant, desired behavior; and they are highly repetitious (Scammon and Christopher, 1981). Interestingly, the most successful spots among teens don't necessarily depict teens. This demographic responds more to positive situations portrayed in a commercial than to portrayals of themselves (Holleran, 1999).

Manufacturers, wholesalers, retailers, the media, and corporate donors frequently engage in cross-selling, the practice of combining promotional efforts to sell a product. Disney, for example, spends millions on cross-selling campaigns promoting its films and characters in exchange for product placement, featuring other companies' products in Disney films. Notably, Disney's marketing partners include Coca-Cola, Kraft, and McDonald's (Consumer's Union Education Services, 1990).

Children are increasingly being targeted by mass media, including television, radio, magazines and newspaper sections written especially for them, as well as interactive computer technology. While television has become more expensive and less effective, the remaining media are more appealing than ever (List, 1992). Many of the hundreds of magazines targeting children carry hidden advertisements in the form of editorials, comics, games, and puzzles. These advertorials, or hidden advertisements, have been described as "subliminal inducements," designed to influence children's purchasing habits (Consumer's Union Education Services, 1990; Raju and Lional, 1990).

Retailers from Abercrombie & Fitch to Target offer magalogs, or magazine-catalog hybrids. This medium gets the brand and merchandise in front of teens without being in their face (Barrett, 2000). Magalogs feature the merchandise, but also include music reviews, relationship advice, anything adolescents might be interested in from a magazine.

Cliff Sloane, founder and Chief Creative Officer of Sloan Group, says the best Web-based advertising occurs spontaneously. If you can deliver your message in a creative enough way, teens will tell their friends, giving an inherent seal of approval. Interestingly, boys and girls approach the Web differently. While boys enjoy the actual technology of the Internet, girls tend to treat the Web as a useful resource (Lippe, 2001).

Corporations such as Nickelodeon, Fox, Burger King, and Disney have created kid's clubs. These clubs establish an ongoing relationship with children by providing membership cards and activities that are dependent on purchases. Many clubs use their enrollment databases to distribute coupons for club merchandise. Kid's clubs promote consumerism, build brand loyalty, and provide corporations a convenient vehicle to deliver commercial messages and reinforce advertising to children (Consumer's Union Education Services, 1990; Raju and Lonial, 1990).

Kids have said that the strongest way to communicate with them is through celebrities. Endorsement is not only effective due to the celebrity appeal in advertisements, but also from peer pressure from friends who see the same commercials (Consumer's Union Education Services, 1990; Raju and Lional, 1990). But which celebrities connect with the audience? Teen society is riddled with change. In fact hip-hop artists and rap stars have replaced Michael Jordan and John Elway as cultural icons. Sports are still important to youth culture, but unconventional athletes in extreme sports, like the popular ESPN X Games, are the current way to connect with kids in the sporting arena (Holleran, 1999; Bronson, 2000; Fawcett, 2000).

The 2001 Reggie Award, a prestigious advertising distinction, went to Sears Roebuck & Co. for its 'Sears is Your Ticket On Stage with Christina Aguilera' program. Positioning the store as a hip-shopping destination with exclusive Aguilera CDs and other branded merchandise, teens and tweens flooded in for their back-to-school purchases. Specially produced CDs were sold through key departments, with a reduced rate with purchase. The teen-targeted CDs included a peek into the pop star's world; a list of her favorite

things; and ‘never-before revealed’ facts about the artist. The advertising campaign included traditional and Hispanic markets; television ads; instant-win game pieces; onsite event marketing; teen Web site advertising; integration with sears.com; and a live AOL chat with Ms. Aguilera (Dolbow, 2001).

A new marketing strategy has emerged over the past several years. Some call it ‘anti-advertising’ others use the term ‘guerilla marketing.’ Smaller brands are doing very well with these marketing strategies that break away from the traditional approaches. Some interpretations seem like student art - simple, rough around the edges, unpolished (Thompson, 2000); others take a grassroots approach. To get everyone from talking about their product, Proctor and Gamble introduced its first salty snack in 30 years with a guerrilla marketing campaign targeting male teens. They visited high-school sporting events, where a customized school bus carried cheerleaders who worked the crowd with a roulette-type wheel listing embarrassing actions that teens were encouraged to perform. One goal of the campaign was “to put kids in fun situations with the product and have them make spectacles of themselves.” Vibrantly colored point-of-sale pieces promised “mischievous fun” (Reyes, 2001). In another vein Abercrombie & Fitch hires the coolest kids and pays them to have fun, thereby packaging, marketing, and selling the product at once. Of course, this tactic is coordinated with the store displays, the Website, and the magalog (Goldstein, 1999).

If you can’t beat ‘em, join ‘em? Funding shortages have led school districts to collaborate with advertisers to finance the cost of educational materials, equipment and services. Marketers see school as the ideal time to influence attitudes, build long-term loyalties, introduce new products, test market, promote sampling and trial usage and - above all - to generate immediate sales. In the classroom the “Total Health” program from NutraSweet teaches kids to use NutraSweet to control weight. “Wecology” magazine from McDonald's teaches the ecological advantages of Styrofoam packaging. Chef Boyardee's “Good Nutrition” program teaches kids to eat pizza and gives recipes that feature Chef Boyardee products. Colorful posters on classroom bulletin boards advertise Reynolds Wrap, Birds Eye frozen vegetables, Promise margarine, and Bakers Chocolate. Although in-school advertising campaigns are a useful way to educate children and teenage youth, they are viewed as a form of “commercialization of the classroom” when provided by corporations in exchange for advertising promotions and test marketing (Consumer’s Union Education Services, 1990; Raju and Lional, 1990).

Instead health practitioners can and must learn and employ marketing principles and communications strategies to address behaviors that result in premature morbidity and mortality. The field of social marketing offers a framework for nutrition professionals to apply to health promotion and dietary behavior.

Social marketing has been described as “the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behavior of target audiences in order to improve their personal welfare and that of their society” (Andreasen, 1995). Social marketing is most often used to disseminate new information; to offset negative effects of an opposing practice or

promotion; and to motivate people from intent to action (Ngo, 1993). U.S. government agencies, including the Center for Substance Abuse Prevention and the National Cancer Institute have employed social marketing techniques for over twenty years (Chapman et al, 1993). More recently, the '5 A Day for Better Health' program and 'Project LEAN' have employed social marketing at national, state and local levels (USDA *Social Marketing*, 1997). USDA's own Team Nutrition program employs social marketing techniques to market healthy school meals and nutrition education.

Effectively marketing behavior change requires knowledge of and attention to many aspects of the targeted population. Cultural norms and values must be respected in tailoring the message. Behavioral analysis allows marketers to understand what motivates or discourages a population, thereby couching their message to effect a change in behavior (Kotler and Andreasen, 1996). Social marketers must consider the population's willingness to adopt and maintain a behavior. And environmental attributes that may facilitate or impede behavior change must be identified and addressed in order for long-term success to occur (NIH, 1992). Only after assessing needs, considering knowledge, attitudes and beliefs, and composing a marketing strategy, can a mass media plan be created. A successful media campaign will help the targeted audience identify a clear message; understand that message; decide if the message is pertinent; and take action (USDA *Social Marketing*, 1997). For these steps to occur, the message must be carefully chosen, the target audience clearly defined, the source of the message must be seen as credible to the target audience, and the message design and delivery must be appropriate for the target audience (NIH, 1992).

A successful social marketing campaign for young consumers is about creating food and nutrition concepts that resonate with the particular target group's desires, values, and behaviors, not selling canned ideas about good nutrition habits (Andreasen, 1995; Lefebvre et al, 1995). Negativity has historically pervaded health messages targeted at adolescents – specifically an emphasis on body size, obesity and fear of fat (Travis, 1999). Teens are tired of hearing about what foods are good and bad for them (Neumark-Sztainer et al, 2000).

Kraak and Pelletier (1998) enumerate several guidelines for creating messages to induce behavior change in adolescents:

- The message must identify the explicit rewards or incentives and barriers that are perceived by this targeted audience.
- Messages must be simple, strong, repetitive, consistent, and specific about desired behavior.
- Messages must promote rewards in terms of taste instead of nutrition.
- Messages and images must be upbeat to engage and excite children and teenagers.
- Messages must convince children and teens that selecting healthful foods like fruits and vegetables is simple to do.
- Messages must be presented in a catchy and easily remembered format.

Overall, the lesson health professionals must take from the advertising industry is this: "To have a successful social marketing program - one that effectively influences the

eating behavior of children and teenagers - we must use multiple and reinforcing communication channels and approaches" (Kraak and Pelletier, 1998). In addition to advertising, multiple, complementary methods such as environmental support are necessary to engender the consistent consumption of healthful foods by adolescents (Scammon and Christopher, 1981). As described previously in this document, the USDA's Team Nutrition program employs multiple channels, and the CDC's coordinated school health model encompasses far-reaching components in order to impact adolescents' health decisions at every opportunity in and outside the school environment (USDA Team Nutrition Policy Statement, 2001; CDC, 1999).

Evaluation - tracking young consumers' responses

Advertising executive Carol Cone of Cone Inc. stresses the importance of evaluation: successful campaigns must put mechanisms in place to measure the results. "If you're looking to sell more, build in sales promotions to the campaign" (Ligos, 1999). For corporations selling a product, sales data are the ultimate test of an ad campaign's effectiveness.

Social marketing interventions attempt to affect as many variables influencing behavior change as possible. Evaluation efforts must be linked to desired outcomes that are realistic for the length, scope and complexity of the intervention. Additionally evaluations must measure intermediate factors in the behavior change process – interpersonal and environmental changes as well as any differences in accessibility and availability (USDA, *Charting the Course*, 1997).

The authors of *Charting the Course for Evaluation* (USDA, 1997) implore potential evaluators of social marketing initiatives to remember a few key points:

- The primary purpose of evaluation is to support movement, not to judge success or failure;
- Monitoring provides a picture of where energy is being spent and whether the initiative is producing the desired effects; and
- Evaluation should begin early and be an integral part of the development process.

While examples of interventions resulting in rapid, drastic behavior changes exist, they are unusual and often impossible to replicate. Far better that evaluators know their own program, how it is supposed to work, who supposed to be effected, how fast and at what level of exposure. Evaluation can then be designed to effectively assess that particular intervention, guiding it to success (Hornik, 1997).

The majority of school-based interventions that employ media and marketing activities incorporate them into the larger nutrition intervention; typically including classroom nutrition education, cafeteria modifications, and parental involvement as well as promotional activities. Evaluation of nutrition media and marketing campaigns is typically undertaken in terms of the intervention outcome: "Did the intervention reach its overall goal?" (Bowman, 1995) Outcome evaluations measure the effectiveness of all intervention components combined, and in this respect social marketing programs must

be realistic about what a marketing communications program can be expected to achieve (USDA *Charting the course*, 1997). Outcome evaluation also leaves questions regarding the way the campaign was carried out, or the process. Process evaluation complements outcome evaluation by assessing the effectiveness of each component of the campaign. As has been discussed, the 'Gimme 5: A Fresh Nutrition Concept for Students' is an exception in that the researchers evaluated the media aspect of the intervention, specifically finding that the media marketing materials and activities captured high school students' attention and were acceptable (Nicklas et al, 2000).

Most often promotional activities employed by local schools go unevaluated. Anecdotal evidence may suggest that the students enjoy the activities and may even be left with a positive impression about nutrition, but effectiveness of these efforts in changing participation in school meal programs and food consumption is unknown. (Chong and Rodon-Ramirez, 2001; Munson and Turley, 2001).

Market researchers utilize focus groups, surveys, interviews, picture drawing, story telling, secret ballot, and observation to gain feedback prior to campaign execution. Surveys, interviews and observation may be useful in evaluating marketing strategies during and after the campaign as well (Nicklas et al, 2000).

Recommendations

Having examined the food habits of adolescents; the efforts made at marketing nutrition in the cafeteria setting; and marketing strategies employed by advertising professionals to reach young people, recommendations can assist in laying the foundation for an effective nutrition marketing plan.

Market Research

Identify the most effective message(s) from a few potential messages by using focus groups to pretest at the concept stage. Ensure that the marketing strategy is appropriate by subsequently pre-testing materials.

Use focus groups, surveys, interviews, picture drawing, story telling, secret ballot, and especially observation to obtain feedback and insights from youth.

A trained youth peer should conduct focus groups in a setting familiar to participants. Ideally, participants will be of a similar age (within 2-years) and unacquainted with each other.

Marketing Strategies

Keep the message consistent. Choose a single message or a few messages that are variations of a common theme.

Avoid messages that are lengthy or that focus on negative health consequences.

Incorporate both nutrition and behavioral messages that address adolescent priorities, such as enhanced athletic and academic performance; better muscle tone; weight control; and improved personal appearance.

Utilize a number of media channels to reinforce one another and to increase the target audience's chance of exposure.

Use point-of-service messages to provide behavioral prompts at the moment students act.

> Place vibrantly colored signage at the cafeteria entrance, perhaps on the daily menu in addition to the POS messages.
>
> Use easily identified labels of POS signage to make food selection simpler. Consider using he Food Guide Pyramid as a familiar and credible graphic.
>
> Focus POS messages on the food's being economical, energy-rich, satisfying/tasty, and convenient.

Teens respond well to taste testing, discount price promotions and motivational, as opposed to educational, messages.

Boys aged 12 to 15 shun the foods their moms approve of, so avoid the wholesome, "it's good for you" plug with this demographic. Extreme sports is a better theme to build on.

Immigration trends, health considerations and cultural issues relating to minority groups in American warrant development of specific messages targeting African American, Hispanic, and Asian populations distinctly. Once these messages are developed, use mainstream, English-language media to effectively reach young Hispanic teens. Messages for Asian groups should focus on improving family health and lifestyle.

Remove barriers and unhealthful options in the environment so that desired behaviors are more readily achieved. In the school, this would mean reconsidering competition to school meals - vending machines, school stores, and a la carte foods in the cafeteria.

Soft drink availability must be addressed if adolescent dietary habits are to improve. With nearly three-fourths of teenage boys drinking nearly three 12-ounce cans of soda each day and two-thirds of teenage girls drinking about two cans per day, students are passing up school meals for the soda machine.

To improve environmental support, apply the principle of cross-selling to the school setting. Team up with teachers to 'product place' nutrition in math, language arts, and science lessons.

Evaluation

Integrate evaluation development into the overall intervention development process.

Include both outcome and process assessments in the program evaluation.

Ensure that evaluation efforts correspond to realistic outcomes given the length, scope and complexity of the intervention.

To assess changes in consumption of the promoted food selections in school meals or cafeteria a la carte offerings, use sales data and total quantities of foods used by school food service staff.

To evaluate youth awareness and acceptability of the marketing strategies include interviews, surveys, or observations in evaluations.

Conclusion

Seizing an opportunity for promotional campaign may begin with something as mundane as a new farm bill. Tom Harkin, a Congressman from Iowa, recently described a farm bill that will subsidize the cost of giving away fruit and vegetables in some school cafeterias as an alternative to candy and snacks that are sold in vending machines. The Agriculture Department buys more than $800 million worth of food annually for schools. The USDA has been buying fresh apples recently to bolster crop prices, and some schools are buying fresh produce from local farmers (Brasher, 2001). By taking a cause-marketing approach, which so appeals to many middle schoolers (Ligos, 1999), adding a POS campaign along with some consistency in the school environment, marketing-savvy nutrition advocates could take these concepts for a test run.

We invite all groups interested in developing marketing programs for schools to apply information from this report to help ensure a successful campaign.

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